

REMARKS

Claims 1, 2, 8, 9, 12, 18, 19, 28, 29, 33, 37-40, 44-48, 49, 53, 66, 69, 72, 74-81 and 86-90 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Berger *et al.* U.S. Patent No. 6,121,200 (hereinafter referred to as “Berger”) and Caldwell et al (Archives of Environmental Contamination and Toxicology) (“Caldwell”). The applicants respectfully traverse this rejection.

Berger is related to using an acid herbicide in the salt form.

Berger states at column 10, lines 47-51:

The present herbicidal compositions are not limited to a particular herbicide or mixture of herbicides. They may be used with a variety of pesticides, including but not limited to **herbicides in any of their water soluble salt forms**. (emphasis added).

Berger further states at column 11, lines 12-17:

Since glyphosate **in acid form has limited water solubility (about 1.2%) the water soluble salts of glyphosate are normally used for most applications**. Among the water soluble **salts** of glyphosate are the trimethylsulfonium salt, the ammonium salt, the isopropylamine salt, and the alkali metal salts, such as sodium and potassium.” (emphasis added).

As noted, these are all salts and Berger teaches away from using the acid form because it has limited water solubility. Furthermore, it is confirmed in Berger that salts are required at column 11, line 45 through 58 which states:

Stable aqueous concentrate compositions of the present invention can be made with glyphosate **salts** at a concentration from about 5% to about 50%, preferably about 35% to about 45%, surfactant composition at a concentration of about 5% to about 25%, preferably about 10% to about 15%, and water making up the balance to 100%. Dry water soluble granular (WSG) or water dispersible granular (WDG) compositions of the present invention

can be made with glyphosate salts at a concentration from about 10% to about 85%, preferably about 50% to about 80%, surfactant composition at a concentration of about 5% to about 30%, preferably about 10% to about 25%, and optionally inert ingredients making up the balance to 100%. (emphasis added).

Berger also states at column 12, lines 51 through 60:

Glyphosate is the widely recognized common name for N-phosphonomethylglycine, the biologically active entity of which is the acid form and may be used in the form of an ester but is normally used in the form of water soluble salts. Water soluble salts include alkali metal salts of glyphosate, and organic salts of glyphosate including onium salts such as ammonium, sulfonium and phosphonium salts of glyphosate. The most preferred salts include ammonium, isopropylammonium and trimethylsulfonium salts of glyphosate. (emphasis added).

Although Berger acknowledges that glyphosate may exist in the acid form, Berger teaches that the glyphosate is used in the salt form. Clearly, Berger teaches away from using the herbicide in the acid form because of the limited solubility. The teaching of Berger to use glyphosate in the salt form is also recognized in the applicants' specification as the prior art. The applicants' specification at page 2, lines 1 through 9 state:

Chlorinated carboxylic acid herbicides are usually have traditionally been reacted into amine or other salts, which are soluble in water, or into esters which are oil soluble. Both salts and esters must then break down in the environment back into the acid, which is herbicidal.

It would be preferable, then, to apply the herbicides as acids. However, they are not significantly soluble in water. Previously, solvents used to formulate 2,4-D acid such as xylene range hydrocarbons, are known to be phytotoxic to plants and may enhance herbicide volatility and subsequent drift to non-target areas. Although D-638 is one such product, but it further incorporates the ester form of 2,4-D into the formulation. (emphasis added).

Again, the applicants have recognized that glyphosate used in salt form is used in the prior art. However, it was not known to use the herbicide such as glyphosate in the acid form. For the above reasons, Berger teaches away from the applicants' claimed invention.

The Examiner combines Berger with a toxicology report on 2,4-D in the acid form. The Examiner asserts that a person skilled in the art could have seen that using Berger's surfactants would enhance the efficacy of the free acid form of 2,4-D. The applicants respectfully disagree. The existence of a toxicology report for 2,4-D in the acid form is not surprising. 2,4-D acid is the initial form in which the herbicide was discovered. However, commercial formulations have always been made from the ester or amine salts of 2,4-D for the reasons stated in the patent application. The applicants acknowledge the prior existence of 2,4-D in the acid form. This is about the extent to which a toxicology report such as that from Caldwell helps a formulation chemist!

As stated above, Berger actually teaches away from using the free acid form of 2,4-D since it is not water soluble. From Berger's patent, "In this regard, a further important aspect of the present invention concerns surfactant compositions which are effective in the formulation of glyphosate-containing herbicidal compositions or pesticidal compositions of other water soluble active ingredients." In several other places of the patent, Berger is talking about amine salts of 2,4-D and other herbicides when he refers to them as water soluble. Free acid 2,4-D is NOT water soluble in appreciable amounts. Only the amine salts are water soluble. Given this fact, it is even less likely that one skilled in the art would combine a toxicology report on the free acid 2,4-D and Berger's patent.

The applicants have discovered a way to dissolve the acid form of this herbicide into a form that is usable by the farmer. Other than D-638 (which the applicants disclose in the

application) which uses an aromatic solvent to dissolve the acid in combination with 2,4-D ester, nobody has commercially introduced a herbicide product which contains 2,4-D in the acid form.

The Examiner must consider the references as a whole, In re Yates, 211 USPQ 1149 (CCPA 1981). The Examiner cannot selectively pick and choose from the disclosed multitude of parameters without any direction as to the particular one selection of the reference without proper motivation. The mere fact that the prior art may be modified to reflect features of the claimed invention does not make modification, and hence claimed invention, obvious unless desirability of such modification is suggested by the prior art (In re Baird, 29 USPQ 2d 1550 (CAFC 1994) and In re Fritch, 23 USPQ 2nd. 1780 (Fed. Cir. 1992)). The applicants disagree with the Examiner why one skilled in the art with the knowledge of the references would selectively modify the references in order to arrive at the applicants' claimed invention. The Examiner's argument is clearly based on hindsight reconstruction.

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching, suggestion, or incentive supporting this combination, although it may have been obvious to try various combinations of teachings of the prior art references to achieve the applicant's claimed invention, such evidence does not establish prima facie case of obviousness (In re Geiger, 2 USPQ 2d. 1276 (Fed. Cir. 1987)). There would be no reason for one skilled in the art to combine Berger and Caldwell. For the above reasons, this rejection should be withdrawn.

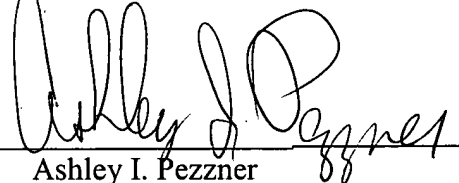
No additional fee is due. If there are any additional fees due in connection with the filing of this response, including any fees required for an additional extension of time under 37 CFR

1.136, such an extension is requested and the Commissioner is authorized to charge or credit any overpayment to Deposit Account No. 03-2775.

A prompt favorable action is earnestly solicited. If the Examiner deems the election non-responsive, the applicants respectfully request that the Examiner contact the undersigned at (302) 88-6270.

Respectfully submitted,

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